TWO-WIRE BUS APARTMENT SYSTEM

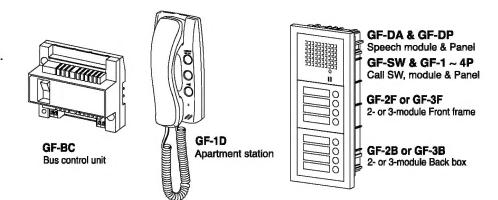
GF SYSTEM

INSTALLATION MANUAL

This Manual is enclosed in GF-BC, Bus Control Unit box. Operation Manual is enclosed in GF-1D Apartment Station box.

Before actually installing the equipment, the contents of this Manual must be thoroughly read and understood.

After installation, please keep the Installation Manual, containing instructions for wiring & programming, as well as WARRANTY.



Precautions on Installation & Wiring

** WARNING (Negligence could result in death or serious injury to people)

CAUTION (Negligence could result in injury to people or damage to property)

O General Prohibitions

Prohibitions to subject the unit to water

Prohibitions to dismantle the unit

WARNING

1. These devices are electrical. Wiring must be performed by qualified personnel.

2. Do not modify or alter the equipment.

Do not connect any power source other than specified to terminals +, -. Doing so may cause fire or damage the unit.

4. The equipment must not be exposed to water or any other liquid.

5. Make sure wires are connected properly before plugging the power supply into an electrical outlet.

6. AC outlet must be away from moisture and dust.



1. Do not install or make any wire terminations while power supply is plugged in, or it could cause electrical shock or damage the unit.

2. Mount the intercom on wall in a convenient location, but not where it could be bumped or jarred.

3. Do not install the unit in any of the following locations, as it may cause the system to malfunction:

- High or extreme cold temperature area:
under direct sunlight, near equipment that varies in temperature, in front of air-conditioner, inside a refrigerated area, etc.

- Places subject to moisture or humidity extremes.

- Places subject to environmental conditions, such as oil, dust, chemicals, salt, etc.

- Places subject to constant vibration or impact.

GENERAL PRECAUTIONS

- 1. The equipment, except the entrance station, is designed for indoor use only. Do not install them outdoors.
- 2. The system is not operable during a power failure.
- 3. In areas where broadcasting station antennas are close by, intercom system may be affected by radio frequency interference.
- Keep all wiring at least 30cm, 1' away from AC100 ~ 240V wiring, fluorescent lighting, or dimmer switches.
 Otherwise, cross AC wiring at a 90° angle.

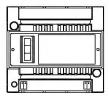
SYSTEM COMPONENTS

Apartment station —— Bus control unit & Power supply

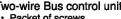




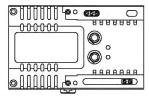




GF-BC Two-wire Bus control unit



- Packet of screwsINSTALLATION MANUAL Hexagonal wrench



PS-24ME (AC 230V)

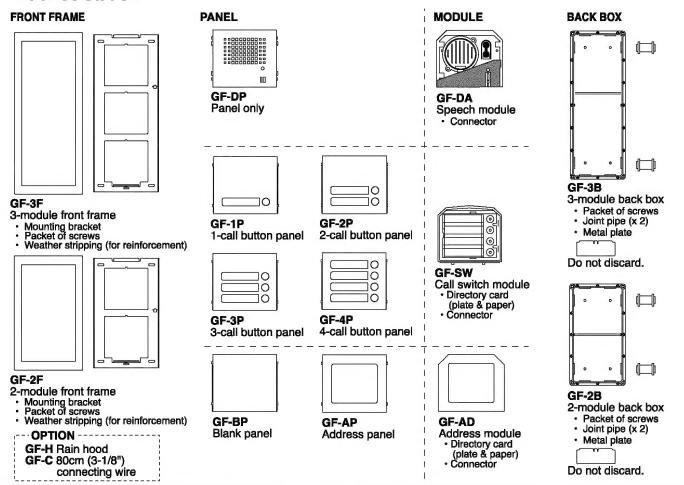
PS-2410LC (AC 120V) PS-2410LD (AC 230V) Power supply

- Packet of screws
- DIN rail Terminal cover
- Fuse



MAW-B Relay for external light

Entrance station

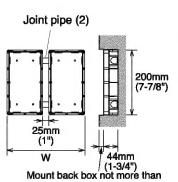


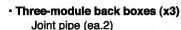
Open a hole in the wall for mounting back box (es).

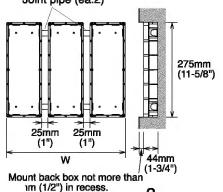
It is suggested to mount the back box at the height of 150cm (5') (up to box center). Allow a space of 2mm (1/8") or more on each side of back box in the wall.

EXAMPLES

Two-module back boxes (x2)







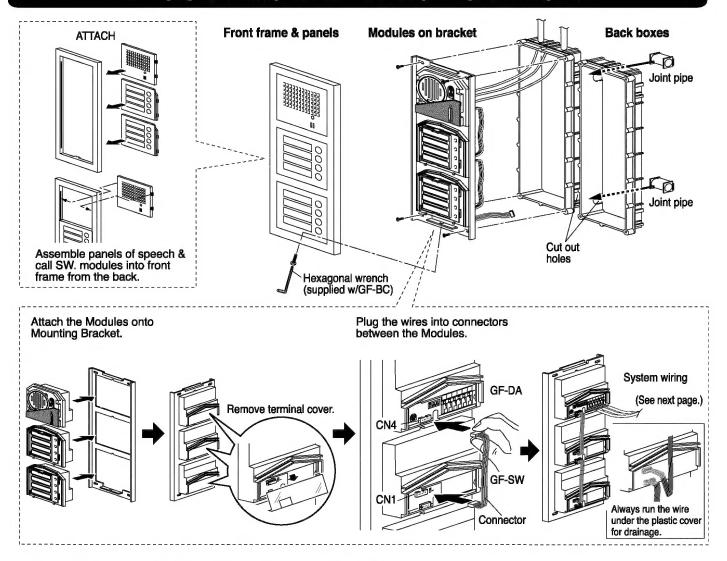
BACK BOX DIMENSIONS

Module back boxes assembled

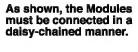
Back boxes	W (mm)	W (inch)
One row	110	4-5/16"
Two rows	245	9-5/8"
Three rows	380	15"
Four rows	515	20-1/4"
Five rows	650	25-9/16"
Six rows	785	30-7/8"
Seven rows	920	36-1/4"
Eight rows	1055	41-9/16"
Nine rows	1190	46-1/8"

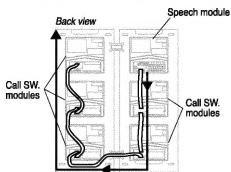
For best results, the back box(es) must be mounted strictly horizontally.

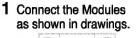
MOUNTING ENTRANCE STATION



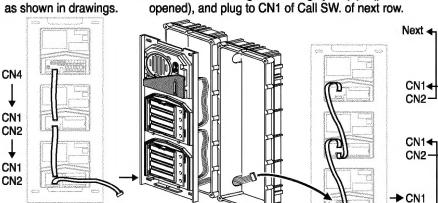
Interconnecting Modules with Plug-in Connectors





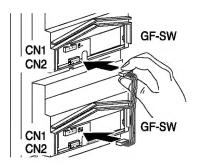


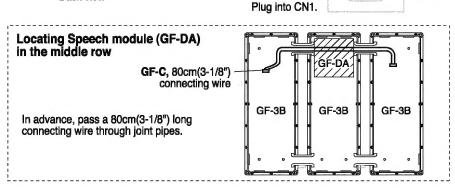
Back view



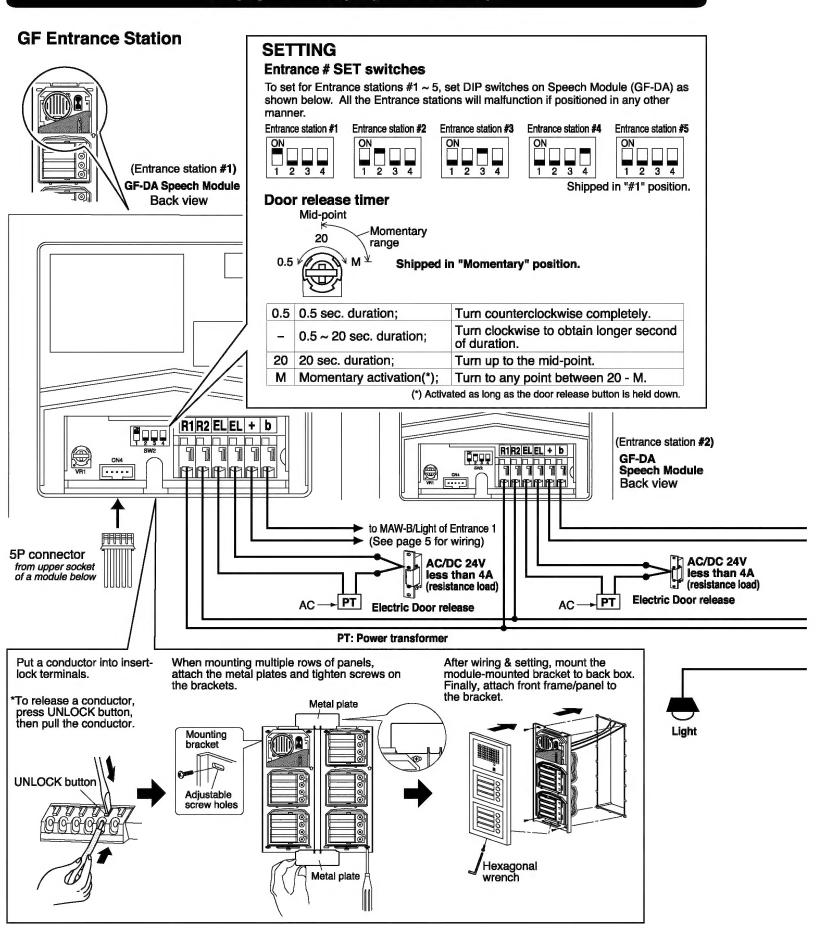
2 Pass the connecting wire through joint pipe (pre-

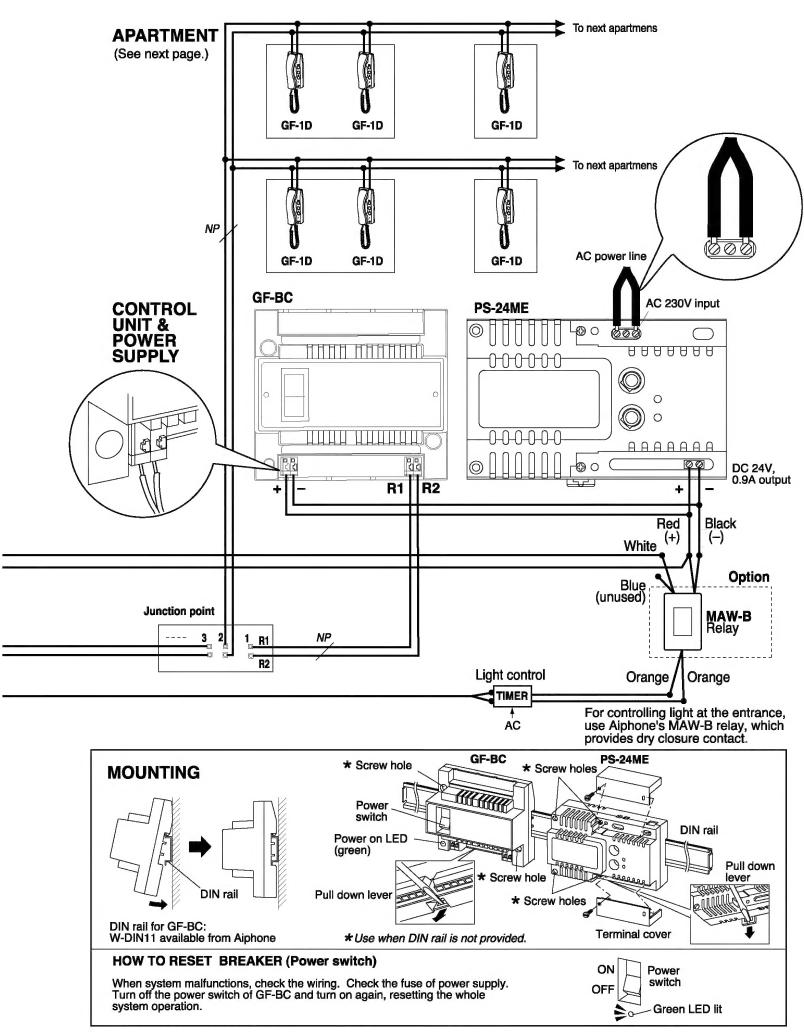
CN2



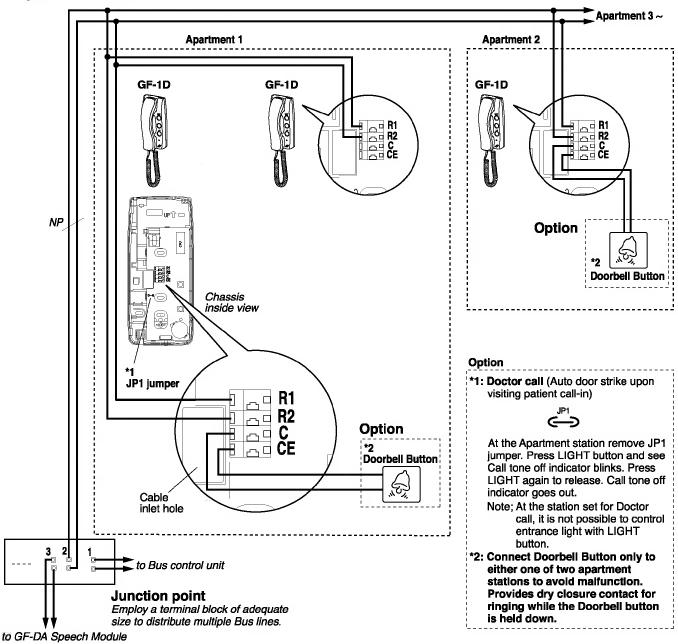


MOUNTING & WIRING



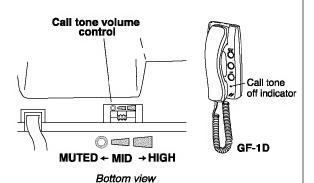


Apartment station



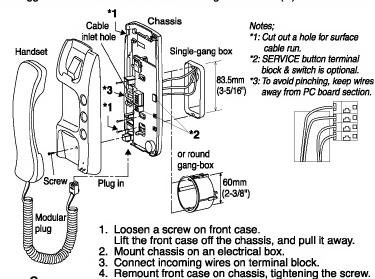
Adjusting call tone volume (or off)

Call tone volume can be adjusted to 3 positons: MUTED - MID - HIGH. When the control is set to MUTED position, Call tone off indicator blinks.



MOUNTING

It is suggested to mount the station at the height of 150cm (5') from the floor.

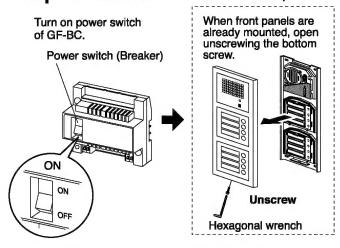


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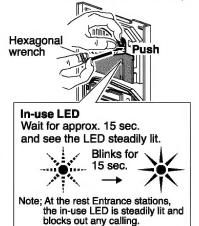
SETTING UP SYSTEM

Prior to setting up GF system, make sure all the stations have been installed and wired in proper manner. Leave the front frame & module panels unattached.

Step 1 Press PROGRAM switch on GF-DA Speech Module.



Open the rubber cap. Then push PROGRAM SW. momentarily.



Step 2 At an Apartment station #1, lift handset. Communication channel is established with Entrance station instantly. Hearing single BEEP tone means the station correctly set. Hang up handset.



SETTING FOR "LIGHT" button (OPTION)
In-use LED

While In-use blinks (within 15 sec.), press an assigned call button.

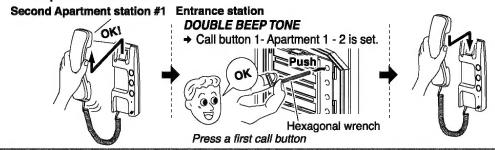
Push

BEEP tone

LIGHT button is set. (Turns on entrance light, controlled by MAW-B

relay.)

For a second station, if installed, lift second handset and press the same call button 1. Beep tone sounds twice.

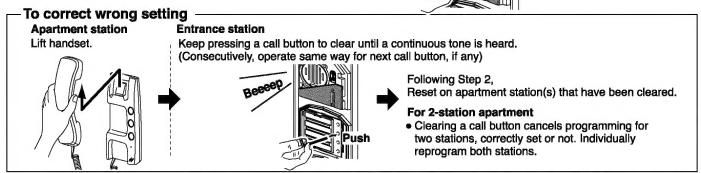


Step 3 Go to each apartment consecutively, and program each handset station in the same manner as in Step 2.

Step 4 When completed, press PROGRAM switch on GF-DA Speech Module again to finish the programming.



Do not forget to replace the rubber cap.



ECHNICAL PRECAUTIONS

Temperature

GF Entrance station: $-10^{\circ}\text{C} \sim +60^{\circ}\text{C} \ (+14^{\circ}\text{F} \sim +140^{\circ}\text{F}).$ GF-BC: $0^{\circ}\text{C} \sim +40^{\circ}\text{C} \ (+32^{\circ}\text{F} \sim +104^{\circ}\text{F}).$ 0°C ~ +40°C (+32°F ~ +104°F). 0°C ~ +40°C (+32°F ~ +104°F). GF-1D:

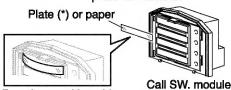
Rain hood (option) GF Entrance station is weather-resistant, but for best results, it should be protected

from direct weather conditions. Install a rain hood (GF-H) to protect it from direct rainfall.

Filling in name & address

Fill in directory or address on the transparent plate with an oil-soluble pen, etc. and attach the

plate to module.



Pressing on either side, remove directory plate or paper.

Pressing on either side, remove address plate or paper.

Address module Before mounting the plate, peel off protective film.

Plate (*) or paper

Setting up after replacement Operations

In case an apartment station is replaced after all the wiring is done, turn the power switch off

and back on again on GF-BC. Then reprogram that apartment station only.

At the end of communication, hang up the handset on cradle. If a handset is off the hook, call tone will still ring at two stations. But for approx. 45 sec. after called, the inside audio is activated on that apartment station and heard at the entrance. Momentarily hang up handset, and resume communication.

While an apartment station rings with a call from an entrance station, a call from the doorbell

button will not be heard.

Cleaning Clean GF equipment with a soft cloth dampened with neutral household cleanser.

Never use any abrasive cleaner or cloth.

PECIFICATIONS

Power source: DC 24V (GF-BC), supplied by PS-24ME or a power supply as specified. **Current consumption:** Max. 700mA. Standby: 30mA (8-call, one entrance). Power source:

Two types of call tones, one from entrance station, the other from doorbell button, distinguishable Call-in tone:

Talk path: Single channel, non-open.

Simultaneous with handset (no calling or communication between apartment stations). Communication: Wiring:

2 wires common Bus, GF-BC to Entrance station(s) & Apartment stations via junction point

throughout system.

2 conductors, solid copper & non-braided, polyethylene insulation, 0.8mm dia. ~ 1.6mm dia. Type of Cable:

(20AWG ~ 14AWG).

Wiring distance:

Diameter of wires	0.8mm dia.	20AWG
Junction point to GF-1D (farthest)	300m	980'
 Junction point to Entrance station 	300m	980'
Total wiring distance	2,500m	1.5 miles
GF-BC to Power supply	5m	16'
GF-BC to Junction point	5m	16'
 MAW-B to each GF-DA, light & power supply 	300m	980'

· Bus line capacity: Multiple Bus lines (divided at junction point).

Apartment station: max. 50 on a Bus line.

Entrance station: max. 3 on a Bus line.

Station capacity:

Apartment station:	Per system: 150 pcs in total	
	Per apartment: max. 2 pcs	
Entrance station:	Per system: max. 5 pcs GF-DA	
	Per panel: max. 25 pcs GF-SW	

 Door release terminals: EL, EL rated less than 4A (resistance load), AC/DC 24V, for dry closure contact for door release.

WARRANTY

Aiphone warrants its products to be free from defects of material and workmanship under normal use and service for a period of one year after delivery to the ultimate user and will repair free of charge or replace at no charge, should it become defective upon which examination shall disclose to be defective and under warranty. Aiphone reserves unto itself the sole right to make the final decision whether there is a defect in materials and/or workmanship; and whether or not the product is within the warranty.

This warranty shall not apply to any Aiphone product which has been subject to misuse, neglect, accident, or to use in violation 🕹 of instructions furnished, nor extended to units which have been repaired or altered outside of the factory.

This warranty does not cover batteries or damage caused by batteries used in connection with the unit.

This warranty covers bench repairs only, and any repairs must be made at the shop or place designated in writing by Aiphone. Aiphone will not be responsible for any costs incurred involving on site service calls.

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AIPHONE CO., LTD., NAGOYA, JAPAN AIPHONE CORPORATION, BELLEVUE, WA, USA AIPHONE EUROPE N.V., ANTWERP, BELGIÚM

